

developed, on which in turn occurred an apogamous embryo. In the latter the root developed first. Only three cases of apogamy were observed in *Osmunda Claytoniana* in Prantl's solution with K_2SO_4 omitted. In two cases the sporophytes developed from a mass of cellular tissue, while the third arose as an outgrowth in the notch of the prothallium. A further study will be made of these apogamous forms.—ELIZABETH DOROTHY WUIST, *Osborn Botanical Laboratory, Yale University.*

RAY TRACHEIDS IN QUERCUS ALBA

(WITH ONE FIGURE)

In the course of a recent study of the medullary rays of the Fagaceae, the writer was impressed with the manner in which some of the fibro-tracheids in *Quercus* were associated with the rays. It is very common

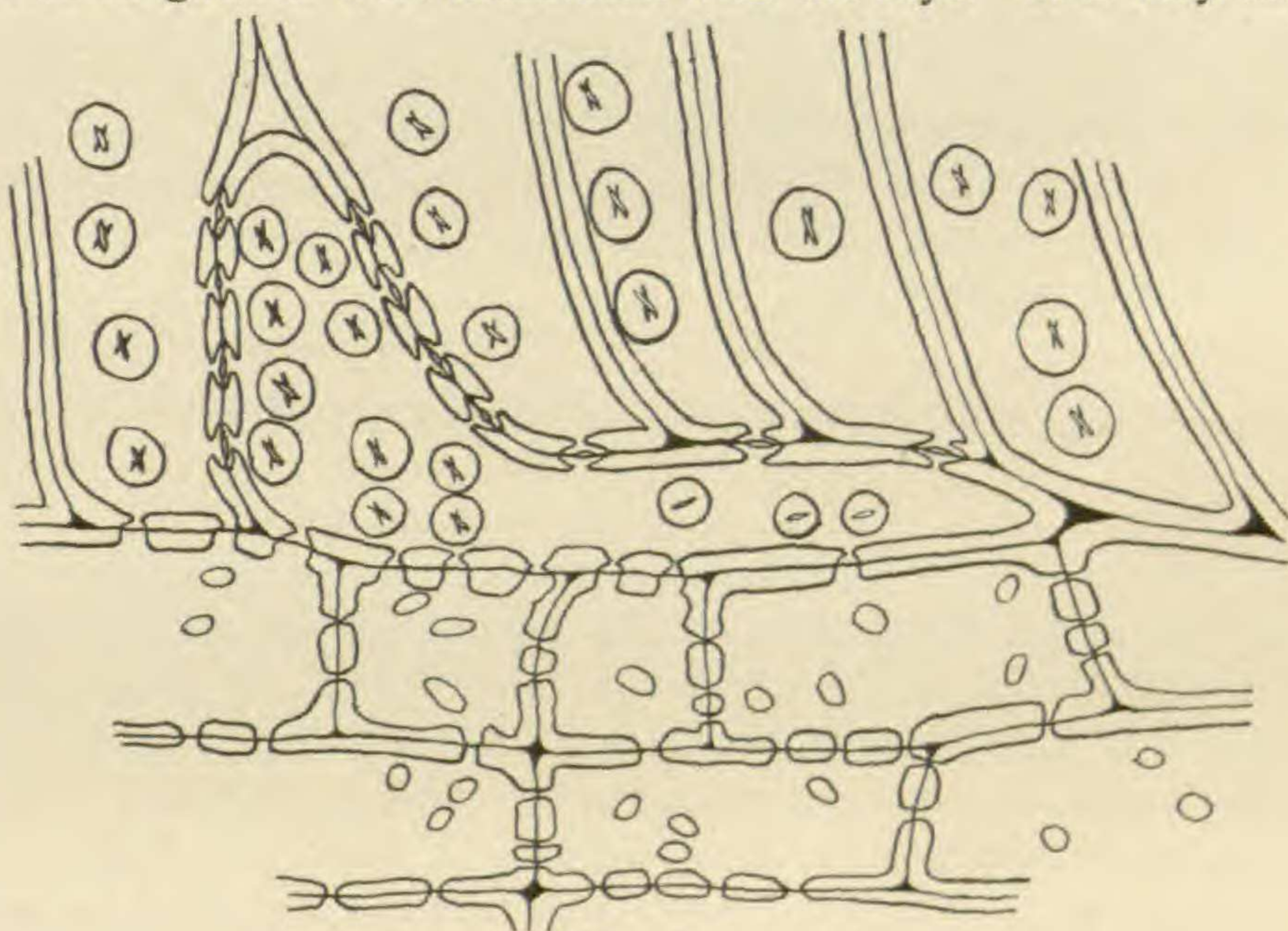


FIG. 1

to find the ends of these elements procumbent on the marginal ray cells for a considerable distance and communicating through semi-bordered pits. This condition is so similar to that found in certain coniferous woods that search was made in sections of oak wood at hand for tracheids that were distinctly radial. Fig. 1 shows a marginal ray tracheid of a uniseriate ray in normal stem wood of *Quercus alba* Linn. Another, somewhat smaller, was found in a different ray in the same section. The location is in the median late wood of the season's growth and is not in immediate proximity to a large vessel. So far as the writer is aware, ray tracheids have not previously been reported in the woods of the dicotyledons.—SAMUEL J. RECORD, *Yale University.*